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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,634	01/10/2002	Shigenobu Nakamura	111650	6573

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EXAMINER	
VAN PELT, BRADLEY J	

ART UNIT	PAPER NUMBER
3682	

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/041,634	NAKAMURA ET AL.	
	Examiner	Art Unit	
	Bradley J Van Pelt	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) *3-5* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 2, and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The structure of the projections of the belt is not clear. It is unclear as to how "the projections directly face each other to allow confronting side surfaces to come into contact with each other." The projections 10 engage the pulley by abutting the pulley grooves 30. Fig. 6 shows the projections (of the belt) not conforming exactly shape-wise to the grooves in the pulley. Evidence of this is shown by the gaps between the valleys of the pulley and the minimums of the belt and also the maximum of the pulley and the midpoint of a horizontal line of an outline of the belt. It is inherent that these gaps or non-conformities allow the pulley to stretch in the axial direction causing the side surfaces of the belts to come into contact with each other. The fact that the projections directly face each other does not allow the pulley to stretch necessarily, because if there were two belts conforming to their pulleys lying next to each other, the end projections could face each other without the ends being able to come into contact with each other.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over White, Jr. et al. (USPN 5,026,327), herein after White, in view of Sato (JP 10-2402)[1].

White disclose an engine auxiliary unit driving equipment for transmitting an engine driving force from a crank pulley (27) fixed to an engine crankshaft to a plurality of engine units, one of which is an alternator for a vehicle, comprising: a unitary driven poly-V pulley, which is provided at least in the alternator, and a poly-V belt having top surface and, a plurality of projections extending parallel in a longitudinal direction so as to respectively engage with the grooves of the driven poly-v pulley, said poly-V belt being bridged between the crank pulley and the driven poly-V pulley so that the engine driving force is transmitted to said alternator via the poly-V belt and the driven poly-V pulley;

another of the engine auxiliary units other than the alternator is provided with another driven poly-V pulley (see. fig. 1);

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[1] As best understood

White fails to disclose at least six grooves extending in a circumferential direction and a plurality of walls between the grooves;

the poly-V belt is composed of a plurality of pieces substantially divided in an axial direction of the driven poly-V pulley so that each piece of the poly-V belts has more than 2 and less than 6 of said projections and, each of said walls is lower than said top surface so that side surfaces of the projections adjacent to each other can directly face each other;

the respective pieces of the poly-V belts are wound in parallel on the another driven poly-V pulley to position perpendicular to the axial direction thereof so that the engine driving force is transmitted from the crank pulley, via the respective pieces of the poly-V belts, not only to the alternator but also to the another of the engine auxiliary units;

the respective weights per unit length of the pieces of the poly-V belts are different.

Sato shows at least six grooves extending in a circumferential direction and a plurality of walls between the grooves;

a poly-V belt is composed of a plurality of pieces (15, 16) substantially divided in an axial direction of the driven poly-V pulley so that each piece of the poly-V belts has more than 2 and less than 6 of said projections and, each of said walls is lower than said top surface so that side surfaces of the projections adjacent to each other can directly face each other;

the respective pieces of the poly-V belts are wound in parallel on the another driven poly-V pulley to position perpendicular to the axial direction thereof so that the engine driving force is transmitted from the crank pulley, via the respective pieces of the poly-V belts, not only to the alternator but also to the another of the engine auxiliary units.

To modify the apparatus of White so as to provide at least six grooves in the pulley would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the teachings of Sato that such an arrangement improves the amount of load that the belt can handle; therefore, the safety factor of the belt is improved.

To modify the apparatus of White so as to provide a plurality of pieces of a poly-V belt would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the teachings of Sato that such an arrangement improves the belt life, therefore, decreasing the maintenance costs.

It would have been an obvious matter to alter the respective unit weights per unit length of the poly-V belt, since such a modification would have involved a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley J Van Pelt whose telephone number is 703.305.8176. The examiner can normally be reached on M-Th 7:00-4:30, 2nd F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on 703.308.3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJVP

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